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FARMER.

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or--
Tread Horse-
Feed-Cutter.
Adjustable

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PHERCERONS FOR MICHIGAN.

Importation of a Number by Mr. George Bradwood, of Almont—Description of a Few of the Animals.

This fall Mr. George Bradwood of Almont, paid a second visit to France, and selected from the breeders of Percheron horses there a number of choice animals which he has brought into this State. About ten days ago, in company with a couple of prominent live stock breeders of Macomb County, we had an opportunity to inspect the lot and see them peed to the halter.

First a lot of seven suckers was led out, just recovering from the effects of the voyage, and being weaned. They looked rather thin, but hearty, and were a large boned, growthy lot, with good legs, backs and quarters, giving promise of developing in a large, useful horses. They come from some of the most noted studs in France.

Next we had a look at Vladimir 786, imported, and formerly owned in Tuscola County. He is a dappled gray, of 16 hands, and weighing over 1,700 lbs. He was sired by imp. Videoc 483, he by Coco 8d (714), he by Vieux Chailin (713). The dam of Vladimir was Rosette, by Vieux Chailin (713), he by Coco (712). This horse has some fine young stock in Macomb County.

Major, an iron gray, with white mane and tail four, years old, is an elegant horse, about 1,450 lbs., finely proportioned, very stylish, and shows the best trotting action we ever saw in a Percheron. He should throw some fine coach and coupe horses when crossed upon fair mares with any style. He was sired by Marquis (774), he by Superior (730), and he by Favori 1711. Major is a good representative of the Percheron in size, style and action.

Two iron gray two-year-olds, very similar in appearance, the larger of the two striking us as being a little the best muscled behind, will develop into large, useful animals, and have the bone and muscle to carry them in good shape. Their legs are especially good, broad, flat and clean from the knee down, with stout forearms and great breadth of hock. The whole lot have splendid backs, broad loins and powerful quarters, the muscles showing great development, although the animals are far from fleshy, and not yet in their matured form.

A two-year-old iron gray, sired by Gross (1061), he by Brilliant (756), dam Sansomette (5002), is highly bred and a large, stylish animal.

Forte, a black, two years old, is about the largest animal for his age we remember seeing. His sire was Thomas (3782), dam Biache (4784). His name is a very appropriate one, as he is a fitting representative of his namesake in Dumas' "Three Guardsmen."

Lucifer, the looking animal, iron gray in color, by Biere Faient (1397), he by Vermaut (767), he by Videoc (732) he by Coco 2d (714); dam Poule (4949), she by Brilliant (710), he by Brilliant (769), he by Coco 2d (714).

Numa, an iron gray, two years old, by Marquis (3844), he by Count (736), he by Biard (1717) he by Favori 1st (711); dam Bleue (4654), Favore.

The figures in the above pedigrees enclosed in parenthesis refer to the French Stud Book, those without them to the American Percheron Stud Book. The certificates of the breeding of these animals are all attested by their breeders and the proper authorities in France, and they are very fully described in these certificates. Mr. Bradwood, who, by the way is a thorough horseman, has made some fine selections in this lot, and we believe his enterprise and good judgment will be duly rewarded. It is something for those who are thinking of investing in this breed of horses to have such a fine lot to select from without going outside of the State. Early purchasers will have the advantage of having a large number of choice animals to select from.

On this farm are some grade Percherons bred by Mr. Bradwood, and they furnish a strong argument in favor of using this breed of horses on the common farms of the country, to produce useful farm and draft horses.

Tattenham Corner and the Derby.

The Derby is run over a course both bad and dangerous. Nobody who has ever seen the horses come round Tattenham Corner, and afterward examined that turn, cannot fail to have been struck with its excessively hazardous character, when ridden round at racing pace. Not only is it a most awkward bend, but it is made worse by the ground sloping like a pent house roof. From the stand side of the course to Tattenham Corner is a gentle declivity, and in a dry season nothing is more likely than that a horse should slip up in rounding the turn. The wonder of the older jockeys, with memories of bad accidents, and their nerves not quite what they were in their youth, should fear the oft-recurring scrimmage at that point, and even at the risk of losing ground give the famous corner a wide berth. The shareholders of the grand stand divide a large dividend yearly, and do next to nothing for the comfort or convenience of their patrons. Racing is becoming every day more of a business than a sport, and if the executive do not mend their ways owners of horses may awake to the fact that the subscription to the Derby is costly, that there is no added money, and that the course is bad and unnecessarily dangerous.—The *Worshipful Review*.

A DISPATCH from New York says that in the first race at Jerome Park on Friday, four of the starters fell and the fine colt Brookwood, belonging to Mr. Cassatt and worth \$10,000, was instantly killed, and little Paul Potter, the high weight jockey of the Dwyer Brothers, who was riding Maggie J., was injured so badly he is likely to die. It was found that the unfortunate boy had his jaws broken, and was suffering from shock. He was still unconscious when the racing was over. It is not thought that he can recover.

Horse Gossip.

Essex County, N. Y., is said to be suffering from an attack of pink eye among its horses.

Mr. J. C. MCFERRAN, of Kentucky, the well known breeder of trotting horses, is dead.

The trotting stallion Robert McGregor has been sold to Colonel West, of Kentucky, for \$2,000.

The American Percheron Horse Breeders' Association has decided to hold an exhibition of Percheron horses next year. About \$11,000 in premiums will be offered.

The stallion Alexander, record 2:19, recently bought for exportation to Hungary, has been sold to a Prussian nobleman, who will put him in the stud.

WENDEWOOD is apparently going to be as successful in the stud as on the track. A two year old colt sired by him has trotted a half in 1:28, and another one a mile in 2:57 $\frac{1}{2}$, the last half in 1:28.

On the 16th Inst., the pacer A. G. Dewey, a grandson of Louis Napoleon, with a record of 2:51 $\frac{1}{2}$, dropped dead on the track at Mystic Park in a race. It was claimed at the time that it was heart disease that killed him, but it is now asserted that he was choked to death by being pulled.

A MATCH race between the trotters Anteo and Adair came off at San Francisco on Friday. The stakes were \$3,000. Anteo won in three straight heats, time, 2:16 $\frac{1}{2}$, 2:20, 2:19. The time of the first heat for a six year old stallion is the second best on record, having been beaten only by Paallas, with a record of 2:13 $\frac{1}{2}$ at that age.

ILLINOIS seems to be suffering from an epidemic of glanders. A horse owned by Burr Robbins, the circus man, died of glanders at Warren about two weeks ago a week ago, during an exhibition of his show there. Word has been received that since Robbins left Warren eight of his horses, which were affected with glanders, have been killed in Iowa, and it is feared by farmers in that section that the disease has been communicated to some of the horses in the vicinity. A dispatch from Bloomington says that several cases of glanders in horses are reported in that vicinity.

Harvesting the Clover Seed.

A correspondent of the *Indiana Farmer* gives his method of harvesting clover seed as follows:

After the first, or hay crop, is taken off, the second, or seed crop, is allowed to grow, and when it has pretty evenly ripened or the heads turned thoroughly brown it is ready to cut, and here there cannot be too much care taken to save the seed. Do not mow it down and rake it up as you did the hay, but use a platform on your mower bar, if you have no "self-rake" reaper.

A platform is easily made by taking two pieces of hard wood, say two by three inches, and long enough to reach from the mower bar, far enough to permit of the seed being raked back and off of the platform and in the rear of the platform and in the rear of the power.

Cover the 2x3 pieces with one-half or three-quarter inch boards, and raise the sides next to the standing grass and rear of the platform say six or eight inches.

Attach the platform to the bar with good and substantial hinges by having two holes drilled in the bar, one at the in and the other at the outer end; taper the 2x3 or bottom pieces, from back, towards the bar and around the rear ends to prevent their catching when backing or turning the machine. Such a platform, properly taken care of, will last many years and save seed enough to many times pay the cost. To use it a man should walk behind it and with a common hand rake keep raking the seed back as it is cut, and every few feet, with a side motion, rake it off in bunches and out of the way. If you have a good self-rake reaper, with side delivery, it is better and much more convenient. After the seed is thus cut, handle it as little as possible, and thresh or hull it as soon as thoroughly cured. In case you cannot get a machine, or you have not the time or inclination, put it away carefully and under cover if possible, or if obliged to stack it, thoroughly cover it with boards, or if you have not these, use marshes to the seed but also to the hay. Clover absorbs dampness very rapidly and will not keep unless protected by something that will turn water and dampness.

After mowing or stacking the seed, do not try to hull it until it has, at least, passed through the "sweating" and had time to dry. The best results are obtained by hulling after a good freeze.

While drying and in case of continued rains, or heavy dew and warm weather, and there is any danger of seed sprouting on the under side of the bunches, it should be carefully turned, using a barley fork, and thus prevent the seed from being damaged. Finally, in selecting a machine or a huller to hull your seed, see that the party running it understands his business and has a good machine, and that he tries to save the seed. A bad threshers or a poor huller, if employed, is dear at any price.

Wattle—Rich red, large, and pendent.

Neck—Long, curving and slanting to the tail; color of plumage, a rich, lustrous bronze hue.

Back—Somewhat curving and rising from the neck to the center, and then descending in a graceful curve to the tail; color of plumage, a brilliant bronze hue, which glistens in the sunlight like burnished gold, each feather terminating in a narrow black band, which extends across the end.

Breast and Body—Breast, broad and full; color of plumage, dark bronze, with a lustre assimilating to that of burnished gold, when seen in the sunlight. Body, long, deep through the center, handsomely and nicely rounded, the hinder part well supplied with short fluff; color of plumage, black, beautifully shaded with bronze, but not so decided or so rich as that of the breast.

Wings—Large and powerful; primaries black or dark brown, penciled across with bars of white or gray, the more even and regular the better; secondaries, black or dark brown, evenly and regularly penciled across with bars of white or gray, the colors changing to a bronze-brown as the center of the back is approached, with but little admixture of white; an edging of white on primaries or secondaries very objectionable. Wing-bows, black, with a brilliant bronze or greenish lustre. Wing-coverts, beautiful, rich bronze, the feathers terminating in a wide black band, making a broad bronze band across the wings when folded, and divided from the primaries by a glossy, black, ribbon-like mark formed by the ends of the coverts.

These tanks are connected with pipes, through which steam and hot water may be forced at pleasure. The process begins with steaming the chips of the cane, after which the hot water is forced through the first one of the tanks, thence into and through the second, thence through the third and fourth, and so on through the entire row. It takes but about fifteen minutes to take all the sweet out of a few tons of cane in this way. Professor Wylie has great faith in the new process. He thinks, by means of it, the yields of the cane fields of both the south and the north may be almost doubled at little additional expense. He has decided, however, to postpone the Louisiana experiments until next season, in order to have the advantage of some necessary changes in the machinery manufactured for this purpose.

Agricultural Items.

IOWA swine breeders are growing more sweet corn every year, as its tendency to lay on fat is better known. Stewell's Evergreen is largely used.

A NEW HAMPSHIRE farmer planted a single potato, weighing 1 $\frac{1}{4}$ pounds, of the Pearl of Savoy variety, cutting the tuber to a single eye. The yield by actual weight with ordinary care, was four bushels and 23 pounds of nice large potatoes.

THE ORANGE COUNTY FARMER says Messrs. Dewey & Hoyt, of Thompsonville, N. Y., who have heretofore annually sired a large number of pigs, are convinced that the continued use of emulsion for three years will use the best corn obtainable. They will therefore abandon the cornucopia secured it a high price in the market, and this aroused the latent meanness of some of their neighbor farm-

ers and some years ago they began to use the brand on their own product. The Darlings brought suit against the most prominent of the users to prevent this infringement on their prescriptive right to the brand, and a decision has just been rendered in their favor, the defendant and all others having been prohibited from using the Darlington brand.

The litigation has been continued for several years, and the defendants must pay costs, which run into the thousands. This decision is gratifying to butter makers, as it protects their reputation, as valuable to them as that of a manufacturer is to him.

The Best Breed for Cheese.

At the late D minor and Provincial Exhibition, held at London, Ontario, prizes were awarded for the best cows for butter, cheese and milk combined, all judged by the same standard, the same as adopted in England and Scotland at the dairy shows. Entries embraced Holsteins, Ayrshires, Shorthorn grades and Jerseys. The Jersey cow, Rose of Eden, made the greatest score that has ever been made by any cow in the world at a like competition, namely, 109 points. The highest Holstein score was 64.29 points. The Ayrshire stood second. V. E. Fuller, who is actively engaged in determining the question as to what breed of cattle is most desirable for the cheese-maker, in a circular on the subject says: "The greatest surprise to many is that out of a given quantity of milk the Jersey not only excels in butter, but excels all other breeds in cheese." He also calls attention to the reports from the Ontario Experiment Farm, where in a competition between a Holstein, a Jersey and an Ayrshire, the Jersey again led for cheese, milk and butter products.

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THE COCK—Rich red, long, broad, and crenulated. Beak strong, curved and well set in the head; color, light horn at the tip and dark at the base. Face and gaws, rich red. Eyes, dark hazel, bright and clear.

Wattle—Rich red, large, and pendent.

Neck—Long, curving and slanting to the tail; color of plumage, a rich, lustrous bronze hue.

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ers and the crop has rotted badly. This breaks up the local trade, for no dealer will buy a bushel except for immediate delivery. The crop will be a heavy total failure causing hard times among the farmers, with whom the potato crop is a main dependence.

W. J. SHEPHERD, of Miller County, Mo., has for three years experimented in planting, the tip, middle and butt kernels of an ear of corn. He has selected 100 grains from each portion of the ear, given the same care, cultivation and soil; and finds that the corn from the tip of the ear will ripen first, that from the middle next, and that from the butt last. From experiments extending over thirty years, he has come to the conclusion that if it is desired to secure an early maturing corn, it should be done by selecting the tip grains for seed.

FANNY FIELD, in the *Prairie Farmer* say: "If your early pullets are old enough to lay and still refuse to go into the business of egg production, I know of no better way to bring them to a realizing sense of their duty to their owners, than to feed meat and raw bone, and give a hot breakfast every day. If the perverse pullets run at large, give the bone and meat three or four times a week, but if confined to yards give a little every day. Let the bone be crushed or ground into bits of a suitable size and well mixed with the morning food. Allow a pint to every 20 fowls. Cook the meat and feed the same way, and in about the same proportion. The object in mixing is to secure a dull white, or gray.

The entire plumage of the hen is similar to that of the cock, except that the colors are not so brilliant or clearly defined, and the edging of the feathers is generally a dull white, or gray.

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Horticultural.

THE LAWSON PEAR.

This pear was shown at the recent meeting of the American Pomological Society, at Grand Rapids; and was rated, by the committee on new fruits, as not even "good"—in other words, below the lowest grade provided for in pomological practice.

The catalogues of those engaged in its propagation describe it as one of the largest of the early pears; and it must be admitted to be a very beautiful fruit; but, also for the quality! he must be most decidedly fruit hungry who would crave a second taste. After sampling it critically, we can hardly determine which to prefer—this or a raw potato.

But why put this forward at all? It is of about the same season as Sterling, which is of similar size, fully as beautiful, and of far finer quality; while the tree is of admirable habit, very vigorous; and, during an acquaintance of more than forty years, has wholly escaped blight; even when other varieties, in the same orchard, have been almost wholly swept away.

A contest has also arisen over the name of this new-old variety. The question whether it shall be recognized as Lawson, or Comet, is being warmly contested by rival propagators.

The rules of the American Pomological Society, which merely recognize and enact what has, from time immemorial, been tacitly acknowledged law in such case, give the originator "the prior right to bestow the name." This question was recently submitted, by those interested, to the editor of the *Gardener's Monthly*, who, with great apparent fairness, decided that the originator—Lawson—had the right, as he had done, to bestow his name upon this fruit. But the contest over the name still rages, nevertheless; and we notice with regret that certain men of pomological standing, seem disposed, like the old-time politician, to try to ride both horses—calling it either Lawson-Comet, or Comet-Lawson; as their interest or fancy may chance to dictate.

There would seem to be some occasion for all this bluster, if the thing itself were worthy of a name; which, in our humble estimation it is not. Better name it Humbug—and thus distinctly advise all intending buyers to let it severely alone.

T. T. LYON.

Models of Injurious Insects.

The following description of a somewhat novel entomological cabinet we find in the *Scottish Agricultural Gazette*:

For a long time some method has been much needed, by which sufficient knowledge for common working purposes, both of the appearance of our injurious crop insects, and likewise that of the injuries they cause, might be conveyed to those to whom such knowledge is of very material importance, without tedious study such as few have leisure and inclination to devote. Plainly worded description, with plenty of illustration, does much, but nothing can equal, for this purpose, the presentation of the injured plant itself, or a *fac simile* model, accompanied by the insect cause of the injury; and it is with great pleasure that we find that twenty cases arranged on this plan—with the addition to each case of a short printed account of the habits of the insects, and methods of ready for their ravages—have recently been added to the collections in the Royal Botanic Gardens, Kew. The clearness of their arrangement and representation makes it impossible for any one, in the slightest degree interested in the matter, to glance at any of the cases without learning something practically serviceable.

The plan adopted is to illustrate one kind of attack in each case. The cases are therefore small, only about a foot long, of proportionate width, with depth just sufficient to hold the specimens, and a glass in front. The upper part of these cases, that is the part that is highest when the case is hung on a wall, is occupied by the injured vegetable or fruit specimen, or a like model. Beneath this the insect-causer of the injury is displayed in all its stages of caterpillar, chrysalis, and perfect insect; or where, from its small size, the insect can only be imperfectly made out, magnified figures are added. Beneath these insects, and the labels which convey their names, are about a dozen clearly printed lines, giving a short history of the insect, and (as far as can be condensed into the space) notes of the most trustworthy methods for the remedy or prevention of its ravages.

In this way the wire-worm, for instance, is shown, together with its perfect form—the black beetle. Above is a model of a potato with the wire-worm at work in it; and to show the pest is an attacker of grass likewise, a small quantity of grass with wire-worms, as seen feeding at its roots, is cleverly displayed by Mr. Morley, the arranger of the cases. Beneath, at the foot of the case, is the history, etc.

In the same way, all who are disposed may learn the appearance in all their stages of the daddy long-legs, an ever-recurring pest; the turnip moth, of which the caterpillar is now ravaging widely; the *Stonax*, or pea and bean weevils; the onion fly, of which the maggot caused a loss of some hundreds of pounds a year or two ago in some neighborhood; and other pests. The vine weevil, the gooseberry moth, and the woolly apple aphid, or American blight attack, are represented among fruit foes; and the goat moth caterpillar, so destructive to timber, is shown excellently in its great gallery; the moth, which is about the largest of our English kinds, accompanying.

The series has been selected with the view of illustrating the most injurious insect attacks, and it earnestly to be hoped that it may be not only useful at Kew, but serve as suggestion for methods of conveying instructions in our country schools. From the fact of one subject only being represented, the learner cannot fail to take in the simple facts put before his eyes; and can carry away a

remembrance of the appearance of the creature, one might hope, with out mental confusion. We understand the plan of arrangement has been elaborated from that of Mr. H. Hale of Frome, Somerset, which took the prize at an exhibition of dry insects there last year—and that the cases now at Kew have been prepared by the entomologist, Mr. S. L. Morley, Beaumont Park, Huddersfield. They meet a great want, and it is to be hoped they may before long be found elsewhere.

Horticultural Notes.

PARKER EARLE, the well known fruit grower of Illinois, has purchased 20,000 acres of land near New Orleans, which he will convert into a dairy farm to supply milk to the city.

The best mats so largely used in this country, especially for packing nursery products, are made in Russia, and about 1,500,000 are sent yearly. The peasants make them from the bark of the lime tree.

At the Indiana State Fair Mrs. E. A. Oldman exhibited some nice pears grown on a two year old graft on the white thorn. The pears were excellent, but the committee were not able to name the variety. Mrs. Oldman is well pleased with the experiment that she will have a whole grove of white thorns grafted with pears of different kinds.

A "pear fruit carrier" which seems destined to be a "long-felt want," was shown at the meeting of the American Pomological Society at Grand Rapids. It is similar in principle to the "egg carrier" already in use, and consists of a pasteboard box with divisions for each fruit. It is designed especially for peaches and pears, and could be used to advantage with certain fine sorts of plums.

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This following is recommended as an excellent method of applying pyrethrum to the cabbage, made of one part of pyrethrum and three parts of plaster of alabaster. It is applied with a wooden bellow by inserting the nozzle among the leaves. When blown out the powder is driven through the plant. This remedy has been found generally effective. The ice-water remedy, strongly recommended some months ago, has been thoroughly tested at the New York Experiment Station and proved of no value.

At a late meeting of the Grand River Valley Horticultural Society George Linderman related a peculiar incident in the vagaries of a grape vine branch. In March last when the ground was still frozen one branch managed to get inside his greenhouse and at once began to grow and sprout, blossomed long before the part of the vine outside the greenhouse showed any signs of vitality, and had kept that far ahead of the rest of the plant, the grapes now being ripe. He could not explain how it grew when the ground was frozen about its roots. Mr. H. Dale Adams thought there must be a circulation through the roots, and where, and as the sap could not force its way to the branches outside it was sufficient to nourish the branch inside. It was to be explained just as the growing of grapes under glasses in Europe.

In the spring of 1883 the Alden Evaporating Fruit Company of New York made a claim that all the artificial evaporators by which fruit is prepared for the market used a process invented by patent belonging to that corporation, and claimed royalties from all manufacturers of dried fruit who did not buy their machines from it. An association of owners and users of fruit dryers was formed to fight the claim in the courts. The case was tried at Canandaigua, N. Y., last June, before Judge Blatchford of the U. S. Supreme Court, and he has just filed his decision, dismissing the plaintiff's suit and holding that the Alden claims to the process are anticipated by several other users, and that their so-called process patents are void. If the claim made by the Alden Company had been sustained it would have laid the entire trade under tribute to that company and given it a monopoly of the business of fruit drying in this country.

Apiarian.

AGRICULTURAL COLLEGE BULLETIN.

Wintering Bees.

BY PROF. A. J. COOK.

The importance of bee culture, as one of our national industries, is hardly appreciated. According to our well demonstrated modern philosophy, plants pour their nectar as a sort of free coffee or lunch, to attract bees and other insects to a most important work in vegetable economy, the work of fertilization, which largely depends upon insects, and without which full fruitage is impossible. The simple work of gathering nectar than is indirectly of tremendous economic importance to the farmer and horticulturist, and to our whole country.

The plan adopted is to illustrate one kind of attack in each case. The cases are therefore small, only about a foot long, of proportionate width, with depth just sufficient to hold the specimens, and a glass in front. The upper part of these cases, that is the part that is highest when the case is hung on a wall, is occupied by the injured vegetable or fruit specimen, or a like model. Beneath this the insect-causer of the injury is displayed in all its stages of caterpillar, chrysalis, and perfect insect; or where, from its small size, the insect can only be imperfectly made out, magnified figures are added. Beneath these insects, and the labels which convey their names, are about a dozen clearly printed lines, giving a short history of the insect, and (as far as can be condensed into the space) notes of the most trustworthy methods for the remedy or prevention of its ravages.

Again, this insect, when acted upon by

the digestive juices of the bee, is converted into a honey, a food long valued for its superior excellence, which, without bees, would be wholly lost; worse than lost, as we see from the fact stated above.

Bees, from their exceeding number and peculiar fitness for the work, are greatly superior to any and all other insects in the accomplishment of this fertilization of plants, while only the honey bees are abundantly early in the season, and they alone save this valuable food element to man.

It goes without saying, that the temperature inside a hive, in which bees are wintering, must generally be warmer than that outside the same. The fact that bees do not hibernate establishes this truth. The thermometer confirms it. We know that moisture is sure to collect on a cool surface; but water dripping upon bees can be fatal. The disturbance and the wetting would both be injurious. To winter bees then with the best success needs a covering that is not a good conductor of heat. Experiments on quite an extended scale have shown me that this is not all theory.

We see then that the requisites to success in wintering bees are: Enough good food, uniform temperature without the hives at about 45 F., slight ventilation, and a cover to the hive which is a non-conductor of heat.

These bees, during each of the last three years, exceeded those of the entire balance of his farm. During all these years this gentleman has never lost a colony of bees, till last winter, when one or two died of starvation. The same experience would be true of any farmer in almost any Michigan neighborhood, who would put the same thought, study, and energy into the business.

WINTER LOSSES.

The one great drawback in this industry is the danger of loss which comes with each of our severe winters, which are unpleasantly frequent of late. Last winter was one of the most severe. Judging from the experience of the last twenty years, these terribly cold winters may be expected about once in three years. If we may judge from the past, we may also safely assert that during these most trying winters there will be a loss of from fifty to one hundred per cent of the colonies of bees in all the northern States. Such a loss as this, unless it can be prevented with ease and certainty, is too serious an obstacle in the way of success to be cheerfully endured, even by those in the most attractive and remunerative of employments, and it is greatly to the praise of apiculture, that, burdened with this loss, we have made such rapid progress.

ARE SUCH LOSSES NECESSARY?

The fact that so many apiarists, like the one referred to above, meet with no loss, makes it clear that with full knowledge, followed by equal care and pains, this loss may be wholly prevented. Many of our best bee-keepers have no more fear of losing their bees than of losing their cattle and horses. We, at the college, have met no such loss for years.

POINTS TO BE CONSIDERED.

Bees are natives of a warm climate, which would lead to the conclusion that in rigorous climates they would need protection, especially at times of great cold. The fact that winter losses are never heard of in California and the south strengthens the argument, which seems almost demonstrated by the fact that our losses in the north always occur in winters of great and long continued cold.

Again, bees are very neat, and in confinement hold their fecal excreta, or try to, till they can fly. If kept very quiet they eat very little—we have had single colonies of bees pass four and five months in the cellar without consuming more than four or five lbs. of honey—and the food they do eat when thus quiet is largely, if not wholly of honey, and so there is very little waste. Thus when quiet bees need not to fly to discharge their feces and so bear confinement for months with no harm. The best condition to maintain this needed quiet is uniform temperature, which experience has demonstrated to be about 45 degs. F. I prefer the temperature about the hive to be kept at from 40 degs. F. to 45 degs. F. In a surrounding temperature much higher or lower the bees are disturbed, exercise much, eat more, and become irritable.

From years of experience and observation it seems pretty well demonstrated that with enough good, wholesome food—30 lbs. of good honey or cane sugar-syrup—and a uniform temperature as suggested above, the bees will winter invariably without loss.

DAMPNESS AND VENTILATION.

It would seem that a damp atmosphere, which, as all well know, is favorable to the growth and development of fungi, and inimical to health in higher animals, would be harmful to bees. It has been found however that in many cases, even during the terribly disastrous winters like the past one, bees have wintered remarkably well in very damp cellars. Sub-earth ventilation secures this moderating agency in air which comes to the cellar, cooled or heated by a long transit through an earth pipe, which runs many yards through the earth, beneath the influence of the outside temperature. To secure the necessary exchange of air and certain influx of the tempering atmosphere, a small-sized stove-pipe connects from near the bottom of the cellar with a stove-pipe, preferably of the kitchen stove above. This small pipe has its lower end open, while above it connects with the kitchen stove-pipe some distance above the stove, else the stove will not draw well, and will trouble from smoking. A second pipe of four or six inch tile also passes from the bottom of the cellar through the wall and thence beneath the frost line or one or two hundred feet through the earth, when it should come to the surface and the end be protected against vermin by use of a wire screen. We can easily see that whenever the kitchen stove is used—daily—the air is drawn from the cellar and the out-door air warmed in winter and cooled in spring and summer is drawn through the tempering soil into the cellar; I have known of this arrangement being tried in many cases, and always with the best results. If it is feared that water may enter the cellar through the sub-earth pipe the joints may be sealed by use of cement, or arrangements made to drain at the lowest point. This arrangement not only protects against extremes of temperature, but it serves over to keep the cellar sweet. Mr. D. A. Jones of Canada, builds above ground, when it becomes necessary to have his building double walled, with a 30-inch space filled in with saw-dust, not only on the sides but above as well. Others dig a pit in a side hill. These methods are only inferior to a cellar in the sense of becoming totally inactive, yet they may and should have their vital activity kept at the minimum else they will need air and quite ample ventilation. As we have seen, cold or heat—this is the temperature much below or above 45 F.—arouses bees, excites nutrition, and of course would necessitate more food and oxygen, and so more ventilation. Unless we can keep the bees then in just the condition to enforce quiet, we must arrange for ample ventilation.

Ventilation has also been much discussed, and various theories have been offered. Yet the physiologist, and especially the physio-entomologist, will not be easily persuaded that insects whose functional activity is so slight that a minimum of food supplies their wants stand in need of much air. One year at the College I sealed a large colony of bees with ice frozen solid at the entrance of the hive, and yet the colony wintered exceptionally well. This colony remained for more than three months entombed in a snow bank. As the hive was glued or propolized at the top we can see that the ventilation was slight indeed. Thus physiology and experience both show that under the best conditions little need be given to ventilation. While bees do not hibernate in the sense of becoming totally inactive, yet they may and should have their vital activity kept at the minimum else they will need air and quite ample ventilation. As we have seen, cold or heat—this is the temperature much below or above 45 F.—arouses bees, excites nutrition, and of course would necessitate more food and oxygen, and so more ventilation. Unless we can keep the bees then in just the condition to enforce quiet, we must arrange for ample ventilation.

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Packing.

Many bee keepers have succeeded well by packing. Southard and Ranney, of Kalamazoo, have practiced packing of single hives with marked success. They place a box about the hives, six inches distant on each side. This space they pack very closely with straw. They also put a chaff sack in the upper chamber of the hive, are sure to have the covers on the hive close fitting, and then pack well above with straw, when they add a cover to keep the straw dry.

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Methods that have secured success. Food.

The food may be either honey or cane sugar syrup. Any kind of honey, if whole some and pleasant to the taste, will answer. Even last winter the bees at the college were wintered wholly on honey gathered in autumn, after the 25th of Au-

gust, and all wintered well, and there was no sign of diarrhea, except in a few cases where much pollen was left in the hives. Cane sugar syrup is quite good, possibly superior to honey at times, as we can be certain that the syrup is free from deleterious elements. The syrup for winter food may be as condensed as possible, and yet it must not crystallize when cold. One half to one third as much water as sugar by weight is about right.

A little honey added will also retard crystallization. A little tartaric acid is often used for the same purpose. It is best to feed quite early so all may be stored and capped before winter's cold prevents further labor in the hive. Bees should never go into winter quarters with less than thirty pounds of food, which will always suffice from September till the harvest of the following summer.

Important Suggestion.

It is well to have all colonies reasonably strong in autumn, and soon after the first hard frost give each colony as few combs as possible and secure the requisite amount of honey. I prefer to use about six Gallop or Langstroth frames, and, by use of division-boards, crowd the bees; then I cover warmly with sacks of fine dry sawdust, and aids greatly to preserve the vital strength of the bees during the cold days of October and November and early the next season.

Uniform Temperature.

If the cellar is all right—surely so—the entrance to the hive may be left wide open in the cellar. If it becomes too cold less ventilation is imperative, if too hot, more may be required. But we must be sure to keep the temperature right. I feel positive that with the proper temperature we need not fear the presence of pollen or bee bread in the hive. If the cellar becomes too cold or too hot, in either case the bees become disturbed, and then I feel certain after many experiments that the bees are safer with no pollen. Yet such a disturbed condition is always dangerous. The fact is we must be able to control and must control the temperature.

The Cover.

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This is the best and most cheaply secured by use of a dry, dry (d.) cellar. As a cellar is entirely or nearly all beneath the surface of the earth or remains unaffected by the severest cold of winter or the more genial warmth of spring. The great requisite is that the temperature shall never go below 30 F., and it is best to keep the ground cellar well secured to the former, when many bees are put into our cellar it is not always so easy to secure against too great heat. There are two ways to accomplish this: First, by use of water in the cellar, and, second, by means of under-ground or sub-earth ventilation. When a running stream from springs can be secured, it forms the most desirable moderating agency I know of. Such water is just about the proper temperature, and while it modulates against heat or cold, it also serves beautifully to dissolve impurities and sweeten the atmosphere. In lieu of such a spring or running water (under-ground) the ground cellar will secure the former, but

MICHIGAN FARMER

—AND—

STATE JOURNAL OF AGRICULTURE.

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The Michigan Farmer

—AND—

STATE JOURNAL OF AGRICULTURE.

DETROIT, TUESDAY, NOVEMBER 8, 1885.

This paper is entered at the Detroit Post office as second class matter.

SPECIAL NOTICE.

We have decided to reduce the price of the Farmer for 1886, and will send it on the following terms: To those subscribing now we will send the Farmer and Household until the first of January, 1887, for \$1.50. This will make nearly fifteen months' subscription for the price of twelve.

WHEAT.

The receipts of wheat in this market the past week amounted to 166,087 bu., against 335,394 bu. the previous week, and 216,088 bu. for the corresponding week in 1884. Shipments for the week were 213,872 bu. The stocks of wheat now held in this city amount to 1,743,243 last week and 677,579 bu. at the corresponding date in 1884. The visible supply of this grain on October 21 was 45,663,616 bu. against 45,179,453 the previous week, and 33,221,843 bu. at the corresponding date in 1884. This shows an increase over the amount reported the previous week of 484,134 bu. The export clearances for Europe for the week ending October 24 were 257,117 bu., against 318,832 the previous week, and for the last eight weeks they were 6,551,936 bu. against 7,944,555 for the corresponding eight weeks in 1884.

The market has ruled less active the past week, sales footing up 150,000 bu. of spot and 1,670,000 bu. of futures. Values advanced early in the week, declined again, but finally closed somewhat higher than a week ago. The addition to the "visible supply" was accepted by the "hears" as a proof of the correctness of their position; but all the same whenever values decline to the neighborhood of 90c in the market, there is sure to be a reaction very shortly afterwards. It is a dangerous market to speculate on, as it is very susceptible to outside influences. Yesterday this market was opened strong for spot wheat, and slightly higher than at the close on Saturday. Futures were unchanged. Chicago was quoted higher, but later declined, and as cables were unsatisfactory there was nothing to hold up values and they dropped down to about Saturday's figures, closing steady. Future closed a shade lower. The Chicago market lower than Saturday, No. 2 spring being quoted at 85c, No. 3 do. at 73c, No. 2 red winter at 89c, and No. 3 do. at 76c. Toledo was quiet, and closed with No. 3 red at 83c for spot and November delivery, December at 95c, January at 96c, and May at \$1.02. Liverpool was reported quiet with large receipts and offerings, no change quoted in values, but market weak.

The following table exhibits the daily closing price of wheat from October 10 to Nov. 2:

	No. 1 white.	No. 2 white.	No. 3 white.	No. 3 red.	No. 3 red.
Oct. 10	94	94	94	94	94
11	93	93	93	93	93
12	94	94	94	94	94
13	94	94	94	94	94
14	94	94	94	94	94
15	94	94	94	94	94
16	94	94	94	94	94
17	94	94	94	94	94
18	94	94	94	94	94
19	94	94	94	94	94
20	94	94	94	94	94
21	94	94	94	94	94
22	94	94	94	94	94
23	94	94	94	94	94
24	94	94	94	94	94
25	94	94	94	94	94
26	94	94	94	94	94
27	94	94	94	94	94
28	94	94	94	94	94
29	94	94	94	94	94
30	94	94	94	94	94
31	94	94	94	94	94
Nov. 1	94	94	94	94	94
2	94	94	94	94	94

The following statement gives the closing figures on No. 1 white futures each day of the past week for the various deals:

	Nov.	Dec.	May
Tuesday.....	94	94	1 04
Wednesday.....	94	94	1 04
Thursday.....	94	94	1 04
Friday.....	94	94	1 04
Saturday.....	94	94	1 04
Sunday.....	94	94	1 04

For No. 3 red the closing prices on the various deals each day of the past week were as follows:

	Nov. 10	Dec. 11	May 12
Tuesday.....	94	94	1 04
Wednesday.....	94	94	1 04
Thursday.....	94	94	1 04
Friday.....	94	94	1 04
Saturday.....	94	94	1 04
Sunday.....	94	94	1 04

Mr. H. Kains Jackson, the great English authority on wheat, writing to a paper on the future of wheat, says:

"Wheat and spring corn alike keep slow of sale, and demand, which with the autumn had been expected to freshen considerably, has not yet increased to any appreciable extent. The situation is not so strong now as it was in September. The contracts now in force entered into this autumn than for a year past, and the quality of wheat on storage has already fallen to a decidedly moderate figure—considerably smaller than at this period of 1884. A careful survey of the wheat resources of the great

shipping countries shows more and more clearly that, while India will be able to ship more freely than usual, both America and Russia will be sending us less wheat than in 1884-5. The total supplies are therefore likely to be smaller than in the past season, and wants are greater. But for the reserves of old wheat, the cereal year 1885-6 would have to do very short come up. The Russian export surplus of wheat was estimated in 1884 at 8,000,000 quarters; for the present year it is reckoned at 5,000,000 only.

CORN AND OATS.

CORN.

The exports of corn in this market the past week were 6,038 bu., against 616 bu. the previous week, and 14,417 bu. for corresponding week in 1884. Shipments were 4,848 bu. The visible supply in the country on Oct. 24 amounted to 5,263,482 bu. against 4,837,128 bu. the previous week, and 5,784,558 bu. at the same date last year. The visible supply shows an increase during the week of 336,311 bu. The exports for Europe the past week were 599,559 bu. against 853,829 bu. the previous week, and for the past eight weeks 6,584,936 bu. against 1,953,834 bu. for the corresponding period in 1884. The stocks now held in this city amount to 7,874 bu. against 10,568 bu. last week and 7,766 bu. at the corresponding date in 1884. Corn is steady in regular State brands and some choice goods have sold 10c higher. Ohio full creams are selling at same figures, and New York at 12c. The Chicago market is firm for good September makes, with a good request from shippers. Sales were about equal to the receipts, so that stocks are only moderate. Off grades of full creams were in light supply and quiet. Other low grades are slow. Quotations are as follows: Young America, full cream, 10c@10c; full cream, 9c@9c; Western cream, 9c@9c; flats, 10c@10c; skinned, choice, 7c@8c; skinned, common to good, 4c@5c; inferior, 1c@2c. The New York market has had a poor week, and values have dropped a little. Quotations there yesterday were as follows:

State factory, September fancy..... 10c@10c
State factory, fancy..... 9c@9c
State factory, good..... 7c@8c
State factory, medium..... 5c@6c
State factory, ordinary..... 4c@5c
State factory, night skins..... 5c@6c
State factory, night skins, selection..... 8c@8c
Ohio flat, fancy..... 10c@10c
Ohio flat, prime..... 9c@9c
Ohio flat, good to fair..... 8c@8c
Pennsylvania skins..... 2c@3c

In regard to the market of the N. Y. *Daily Bulletin*:

"Most holders were down to 10c on the finest stock, or at least enough of them to meet a great deal better than developed, but that seemed to be the stopping point, and no strictly fancy cheese could be reached for less money. On the other hand, 10c was the best general bid, but made with bold bid by one or two dealers, who held out for some time. It was not until the market had come to a standstill that some came to purchase to some extent. As a rule, however, the advices at hand still seem to deter an export movement in the ordinary channels, and the shipments will be made up largely of through lots and consignments by local receivers who must take that course or store. Medium and lower quality not wanted, but skinned meet with some attention at former rates.

The receipts of cheese in the New York market the past week were 48,843 boxes against 55,527 boxes the previous week and 61,273 boxes the corresponding week in 1884. The exports from all American ports for the week ending October 24 foot up 3,058,273 lbs., against 2,988,907 lbs. the previous week, and 2,915,091 lbs. two weeks ago. The exports for the corresponding week last year were 5,722,572 lbs. Liverpool quotations for American cheese yesterday were 50s. per cwt., same figures as quoted one week ago.

WOOL.

Quiet and steady is the report that comes from eastern wool markets. While trade is less active and sales show a decline from the large totals of many weeks past, prices seem to be well maintained. Manufacturers have secured large stocks and are out of market for the present. If there were any weakness in the trade now is the time it would show.

At Boston the past week the sales aggregated 2,751,676 lbs. of domestic, and 304,000 lbs. of foreign, as compared with 3,034,200 lbs. of domestic and 140,500 lbs. of foreign the previous week, and 1,490,300 lbs. of domestic and 361,000 lbs. of foreign for the corresponding week in 1884. The total sales of wool in Boston since January 1, 1885, have been 144,850,372 lbs. against 102,788,853 lbs. for the same time last year. This shows an increase of 42,061,519 lbs.

Among the sales of washed fleeces were Ohio XX and above at 8c, Ohio and Pennsylvania X at 33@34c, No. 1 Ohio at 35c, Michigan at 33@34c, Ohio delaine at 35c at 37@38c, and Michigan delaine at 35c. A great deal of the Texas wool sold is on private terms, which are likely to be above present quotations. Among the sales reported are fall Texas at 20@22c, and spring Texas at 25c; California spring at 19@20c; Oregon at 21@22c, and unwashed and unmerinoable at 20@22c. Some Australian wool sold at 33@37c, and New Zealand at 40c. The *Boston Commercial Bulletin* says of the market: "The Texas wool remains quiet and features remain quiet and featureless. The clip is good proportion of XXX, 3c. Good No. 2 white, 33@34c; No. 3 white, 32@33c; No. 4 white, 33@34c; No. 5 white, 34@35c; No. 6 white, 35@36c; No. 7 white, 36@37c; No. 8 white, 37@38c; No. 9 white, 38@39c; No. 10 white, 39@40c; No. 11 white, 40@41c; No. 12 white, 41@42c; No. 13 white, 42@43c; No. 14 white, 43@44c; No. 15 white, 44@45c; No. 16 white, 45@46c; No. 17 white, 46@47c; No. 18 white, 47@48c; No. 19 white, 48@49c; No. 20 white, 49@50c; No. 21 white, 50@51c; No. 22 white, 51@52c; No. 23 white, 52@53c; No. 24 white, 53@54c; No. 25 white, 54@55c; No. 26 white, 55@56c; No. 27 white, 56@57c; No. 28 white, 57@58c; No. 29 white, 58@59c; No. 30 white, 59@60c; No. 31 white, 60@61c; No. 32 white, 61@62c; No. 33 white, 62@63c; No. 34 white, 63@64c; No. 35 white, 64@65c; No. 36 white, 65@66c; No. 37 white, 66@67c; No. 38 white, 67@68c; No. 39 white, 68@69c; No. 40 white, 69@70c; No. 41 white, 70@71c; No. 42 white, 71@72c; No. 43 white, 72@73c; No. 44 white, 73@74c; No. 45 white, 74@75c; No. 46 white, 75@76c; No. 47 white, 76@77c; No. 48 white, 77@78c; No. 49 white, 78@79c; No. 50 white, 79@80c; No. 51 white, 80@81c; No. 52 white, 81@82c; No. 53 white, 82@83c; No. 54 white, 83@84c; No. 55 white, 84@85c; No. 56 white, 85@86c; No. 57 white, 86@87c; No. 58 white, 87@88c; No. 59 white, 88@89c; No. 60 white, 89@90c; No. 61 white, 90@91c; No. 62 white, 91@92c; No. 63 white, 92@93c; No. 64 white, 93@94c; No. 65 white, 94@95c; No. 66 white, 95@96c; No. 67 white, 96@97c; No. 68 white, 97@98c; No. 69 white, 98@99c; No. 70 white, 99@100c; No. 71 white, 100@101c; No. 72 white, 101@102c; No. 73 white, 102@103c; No. 74 white, 103@104c; No. 75 white, 104@105c; No. 76 white, 105@106c; No. 77 white, 106@107c; No. 78 white, 107@108c; No. 79 white, 108@109c; No. 80 white, 109@110c; No. 81 white, 110@111c; No. 82 white, 111@112c; No. 83 white, 112@113c; No. 84 white, 113@114c; No. 85 white, 114@115c; No. 86 white, 115@116c; No. 87 white, 116@117c; No. 88 white, 117@118c; No. 89 white, 118@119c; No. 90 white, 119@120c; No. 91 white, 120@121c; No. 92 white, 121@122c; No. 93 white, 122@123c; No. 94 white, 123@124c; No. 95 white, 124@125c;

Poetry.

THE OLD MAN'S DREAM.

On, for an hour of youthful joy!
Give back my twainth spring;
I'd rather have a bright-haired boy,
Than reign a gray-haired king.
With the wrinkled spoils of age,
away with earing's crown;
Your out life's wisdom-written page,
And dash its trophy down.
My flowing angel heard the prayer,
And calmly smiling said:
If I'd touch thy silvered hair,
Thy beauty with hate sped.
There is nothing more thy track
We bid the fondly lay,
While the swift sea-one hour back
To find the wished-for day?
Ah, best, best of woman kind,
Without what were life?
One life I cannot leave behind;
I'll take—my precious—wife.
The angel took a sapphire pen,
And wrote with morning dew,
"Thou would be a boy again,
And be a husband, too.
And is there nothing left unsaid,
Before the change comes?
Remember all those girls have fled
With the revolving years."
Hes, for memory would recall
My fond parental joys;
I could not bear to leave them all;
I'll take—my girls—and boys.
The smiling angel drops his pen—
"Why it will never do;
The man would be a boy again,
And be a father, too."
And so I laughed. My laugh awoke
The household with its noise,
And wrote my dream when morning broke,
To please the gray-haired boys.
—Oliver W. Holmes.

BABY'S FIRST BIRTHDAY.

When the sun sets and trails
His red robes through the west,
When 'er the sun the daylight pales,
And thickly speaks of rest,
A mother sits and sits
Her first to have to sleep,
While every breath in whispers brings
Good wis o'er the deep;
"O mother in whose life
This far joy has come,
Mid-off skies toll and strife
Our hearts are nowise dumb;
We thank God for the gift
That He has sent to you,
We pray that He will yet lift
All clouds that lie the blue,
And that His love may press
You and your babe to day
With that perfect happiness
Which never fades away!"
—G. Weatherly.

LIFE.

This one thing will I do: Most gratefully
I will accept the life God gives to me,
And wear it proudly, wear it patiently.
Molded and fashioned by His mighty hand,
He gives to me the life that He has planned,
And bids me take, and see, and understand.
Among the millions of eternity,
This as then art there is no one like thee.
On life, I bow before thee reverently!
High privilege—a gift so rare to take!
Lo, I accept it, an' for thy great sake
Of this I'm to thee given, the best will make.
It is the crown of joy or crown of thorn,
But as we give all each to turn the worn,
And proudly, patiently, the life be born.
—Elizabeth French.

Miscellaneous.

WON BY A VOICE.

Little Mrs. McCandless sat in her pleasant breakfast room, rocking nervously in her great easy chair, the soft zephyr work which usually occupied her fat, dimpled hands, lying unheeded on the floor by her side. Her white hair was parted in fluffy waves on either side of her knit brow, and a cunning little breakfast cap completed her charming coiffure. She was such a pretty little old lady, with cheeks still pink and smooth, and but for her white hairs, notwithstanding her 55 years, would not have been thought a day over 40. Now as she sat, waiting to pour the coffee for her son, Scott McCandless' late breakfast, her face showed that some serious sub-^{ject} of thought was occupying her mind. Then there was a look in her eye, an inward concentration as if all her powers, even that of vision, were centered on some plan which she was concocting. Drumstick, a puppy which Scott had bought not long before, and who usually kept the lady of the house in a condition of defensive warfare, began to trouble the plush cushion before his master's easy chair, keeping his eye on his mistress meanwhile. But attracting no notice in that direction he grew bolder, and from a quiet chewing of his tassels, proceeded to treat it as an imaginary enemy, dashing at it, shaking it vigorously, throwing it up into the air, scampering off and leaving it for dead, and then rushing back to go through the same maneuvers again. Still his mistress was buried in thought.

"Let me see, Clara is coming the 18th, that will be Wednesday. I do hope she's a nice girl so that Scott can fall in love with her. There's nothing like marrying for settling a man down. Not that Scott's wild, but dear me, that boating, and all that—I know he'll get drowned some time, I should never have given my consent to his going to Yale if I had known he was going to take so much rowing with his other studies. It's so dangerous! And now he's got a bicycle, I don't suppose I'll get to see him only at breakfast any more. I wish there had never been a bicycle invented. And Scott is talking of making a tour through Europe on it, already. If he had a wife, now, he couldn't, for he'd always have to be along to look after the trunks; and then he wouldn't want to leave her and go off traveling by himself, anyway. He will be sure to get killed crossing the Alps, or something. I wish he'd say it's dreadful dangerous, and a bicycle would make it a good deal worse. And I can't go with him to see after him—I can't cross the ocean at my age. I am too old now to make such a journey."

Here Drumstick gave a series of yelps that fairly made the chandeliers rattle, and

his mistress, fully roused now, rescued the tattered remains of the cushion and rang for a servant to put the dog out. But Drumstick had crept away under the piano, and seemed so quiet and overcome with remorse that when the servant came his mistress relented and sent her away and let the dog remain.

"I do hope when Scott does get a wife she will insist on his not keeping a dog. But if Clara is at all like her mother she will be too tender-hearted to do anything of that kind. I remember when we were both girls at school together, Samantha never would hurt a fly even; and Clara looks like her mother. Well, maybe it would be for the best, anyway. Men don't like to have their wives find too much fault with them; and a man must have something to amuse him."

At this point in her soliloquy, Scott entered. He had been off somewhere the day before to witness a regatta, so his mother wouldn't have him called this morning, for fear he might be tired. He was tall, handsome, dark-haired, and dark-eyed, and much as his mother lamented his fondness for sports which she considered dangerous, they had given him splendid muscular development. He came now, and bending over the little woman, kissed her cheek. "Have you been waiting all this time for me, murtherer?" he said. "I am late. But yester day, after the regatta, I had to attend a little dinner with the boys for the sake of old times, and so didn't get to bed very early."

Scott had such a tender, caressing way always toward this fond little mother, that now she almost gave up her plan so that she could keep him all to herself. Save the privation of his presence, she could have endured any privation on his account; but this was not necessary, for Scott's father had left them ample fortune when he died, and left the two alone in the world to become everything to each other. Then there was Scott's law practice, too, with which he occupied himself sufficiently to call it business, and give him the feeling that he was not altogether an idler.

"Clara Gamage is coming Wednesday," said his mother, after Scott had given her a glowing report of the regatta, and how the blues, his own color, had pulled against odds with the reds, but kept cool and steady, and then, with a spurt at the last, had shot in three lengths ahead and won the race; and how they had all been invited to dine afterward with the president of the college, Scott among the rest for the sake of auld lang syne, and he had responded a toast, and the boys had greeted his speech with immense applause. And the proud and gratified little mother decided that it would be a very superior woman, indeed, who would be worthy of her boy. She wouldn't give him the least hint of any design of hers in regard to matrimony until she had seen Clara, and made up her mind as to her merits. But there was something in the very air with which she made the announcement, in the expression of repressed confidence, as she handed over Clara's letter and picture for his inspection, in certain impalpable, mysterious hints that she let slip that were transparent as water.

Clara Gamage arrived on the day appointed, and even before Scott had come home to dinner had fairly taken Mrs. McCandless' susceptible heart by storm. She was even handsomer than her portrait, for it could not show the delicate changing colors which would come and go with every passing emotion, nor the deep violet blue of her large eyes, nor the golden, silken splendor of her hair. That night after their guest had retired and Scott and his mother were having their quiet bed-time talk, a habit Scott had retained, instead of laying it aside with his waistcoat and knickerbockers, after the usual manner of boys, she broached the subject uppermost in her thoughts.

"Isn't she lovely, Scott? Didn't you fall desperately in love with her at first sight? I am sure I did!" "If I did," returned Scott, lazily, "I fell desperately out again as soon as she opened her mouth. Such an utterly expressionless voice I never heard in my life. It disappoints me one, too. It is as if a magnificently carved rosewood piano could only furnish the feeble notes of the small harps the children use as playthings. It is as if Goliath, all glorified with flesh lips divine, should have opened her lips in voice common to coarses and as if Hebe or Diana had addressed one in the tones of an indifferen shop-girl."

"But, Scott, dear, she can't help her voice. Her mother, I remember, had just her voice exactly, and she is a very good woman," pleaded his mother. "To be sure she wasn't so very good in her books, and she didn't stand very high in her classes, but she was always good-natured and ready to do whatever we wanted her to."

"Of course she can't help it, and no one is charging her with it as if it were a crime. I am only giving it as a reason for my not falling in love with her," returned Scott.

"But you did, Scott! You spoke as though it was something against her character."

"Well, I don't know anything that reveals character more quickly than the voice. To the keen, sensitive ear, it must always be the keynote to the symphony we call character. But it does take a quick ear to detect it, mother, and if Miss Gamage has her doubtful voice from her mother, why I suppose I must have inherited my fatidistic sense of hearing from mine; so you can't blame me, can you?"

And with this subtle bit of flattery, his mother was quite appeased. She had thought all along that Scott was quite too good for any ordinary woman, and, now that she took time to think, she remembered that the girls at school had sometimes held Samantha Gamage in contempt because she took so readily the cast of all their opinions. To be sure, Clara wasn't to be blamed for her mother's failing, but then she might have inherited more than her voice from her parent.

The visit of the beautiful nymph passed with no substantial results in the way of matrimonial alliance, further than

the admiration of Scott's gentleman friends, whose ears did not chance to be unusually sensitive in regard to voices.

"Mother, I believe I've found her!" exclaimed Scott one day, as he came home from his office and dropped on a ottoman at his mother's feet.

"Found who—the kitten? I told Martha that Snowdrop would turn up all right in time—cats always do. She was talking about getting a trap for the mice; but traps are such barbarous things. A man don't like to be the best, anyway. Men don't like to have their wives find too much fault with them; and a man must have something to amuse him."

"But it wasn't Snowdrop I mean; mutterchen. It was the future Mrs. Scott McCandless."

"But I didn't know you had anybody in view, Scott. Why didn't you tell me before? Is she pretty? How tall is she? What color are her eyes? Do you know whether she has a sweet temper?"

"I don't know, I'm sure," faltered Scott. "The fact is—I haven't seen her myself."

"You haven't seen her, Scott? I don't understand," said his mother with a puzzled, incredulous look.

"No I haven't really seen her face at all; but I have heard her voice. Oh, I wish you could have heard her voice, little mother; it had the full-toned depth and richness of the soft notes of a violin in the hands of a master. Why, mother, you would just feel as if you wanted her to go on talking forever, so that you could listen to it. I can't describe it. It wasn't loud and yet its lowest tones were distinct and bell-like."

"And what did she say?" asked his mother, still more helplessly bewitched by her son's impassioned speech.

"Why, she—well, not anything of consequence; in fact she was in at Sturges' and had made some purchases of other, and she said something like this: 'Excuse me for troubling you, but there should be evened out the old time's, and give me the feeling that he was not altogether an idler."

"All aboard!" called the conductor; and looking down at his mother's falling tears, the two loves in Scott's heart fought a terrible battle then and there. But the old love triumphed, and he tenderly helped his mother into the car and seated himself beside her. But in the soft mother heart no dark passions could long hold sway, and before they had reached the first station, pity and remorse took the place of jealousy, and she leaned over and whispered in Scott's ear:

"I am so sorry we didn't stay. But we can go back yet, can't we?"

Scott shook his head. "It's too late now, little mother; but don't you worry. She may be a married lady for all I know, and you may now have only saved me from making myself ridiculous after all."

"Did you find out where she lived, Scott?"

"No," groaned Scott, betrayed by the question into more of a confession than he had at first intended. "I didn't want to be offensively obtrusive, so I waited 'till the next elevator; but when I reached the street she wasn't to be seen anywhere. I could have recognized her among any crowd—that tall, slender, black-robed figure."

And Scott did see her on the street a week or two later. He had got into the habit of looking up and down the street, glancing into stores, noting the occupants of carriages, and scanning crowds eagerly for black flowing cape veils; and one day he saw the object of his thoughts entering a street car nearly a block away. He started in pursuit. He walked rapidly, but the car-driver being a little behind hand, probably urged his horses into a trot. Scott became excited, and walked at the top of his speed; still the car gained on him—it would soon be out of sight. He ran. The bootblacks and newsboys yelled "Stop thief!" and "Go it long legs!" I'll bet on the one that wins!" But Scott never heeded them. He was already lessening the distance, when at once it came over him like a flash, of what a curious spectacle he would present to rush into the car, flushed and perspiring, making himself ridiculous not only to the car-load of passengers, but—horrid thought—in the eyes of the divinity with the voice. Then, as one thought always brings others in its train, came the reflection that he had expressed a desire for. She must make amends in some way. And even when everybody else was waving her handkerchief wildly, or shouting himself hoarse over the winning crew, she was hovering near the winning team and there.

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RUNNING THE WEEKLY.

In the twilight, in his sanctum sat the editor alone and his mighty brain was throbbing in a very lofty tone:

But he recited a deathless poem, that was fraught with fanaticism,

And he thought of Quill, his "a. c.", and contrived a plot for him.

Then he stopped right in a leader on the Harpoen war,

While he wrote a puff for Barleycorn's new family grocery store;

And just as he got started on the "Outlook of To-day,"

The foreman came to say the come, had struck for higher pay.

Then he started on a funny sketch, a fancy bright and glad,

When Blah, the undertaker, came to order out his "a. c.,"

He snarled and wrote the title, "The Reflections of a Sage,"

When the panicking devil broke in with—"They've plied the second page!"

He sighed and took his scissors when the ever fancy bore said, "A. c., writing editoria—" then he wittered on, "I am gone,"

And as the scribe was feeling happy writing up the fray,

His landlord came to know if he "could pay his rent-day?"

In deep abstraction then he plumped the paste brush in the ink.

And snarled, "Thank you, sir, so you will in-

sist on it, I think—"

When from the business office came the ca. heir,

"Here's a mess!"

Compton & Rollin's put a big attachment on the press!"

Then broke the editorial heart; he sobbed and said, "Good by!"

And forth he went some far land, from all his woes to fly,

But on the second mile was flown, he sank in wild despair—

The Wabash line took up his pass and made him pay his fare!

—Robert J. Burdette.

MISS ELLA ON THE FARM.

The True Story as Related by the Farmer Himself.

To the Editor: Noticin' in your column quite recent a paragraph to the following:

"Miss Ella Witchazel, a charming young school teacher of Vicksburg, Iowa, finding the close confinement and arduous duties of the school-room injuring her health, tried the out-door cure. Instead of spending her winter's salary and summer vacation in a crowded hotel at the seashore, she went on a farm, cut twenty acres of prairie hay, harvested forty acres of wheat, gained twenty pounds in weight, a coat of tan for her hands and face, and a rugged health that cannot be equalled anywhere off a farm, that's the girl you are looking for, young man."

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FOR THE FAT STOCK SHOW.

The Fat Stock show opens at Chicago November 9th, and runs until Nov. 19th. The managers of the Chicago & Grand Trunk, and the Detroit, Grand Haven & Milwaukee railways have arranged an excursion at a very low rate to Chicago to give the people along the lines of their roads an opportunity to visit this great show at a nominal expense. On Thursday, November 13th, they will sell tickets good to go on any train, and valid to return at any time up to and including Monday, Nov. 16th, at \$5 for the round trip. These tickets will be sold on the line of the D. G. & M. Ry., at all stations between Birmingham and Lowell. On the Chicago & Grand Trunk at all stations between Port Huron and Bellevue. All stations on the Michigan Air Line, including Romeo and Armada. With these rates of fare we look for a large delegation from Michigan.

Feeding Cattle in Holland.

At the Agricultural Congress of Gouda, in Holland, the question of milk in the fattening of calves was examined. It was admitted that feeding milk ought to be sweet and fresh; that in the least degree sour, will provoke complications in the feeding. In some districts where the price of butter is low, a greater percentage of cream is left on the milk for feeding purposes. This can be effected where the milk is mechanically skimmed two hours after being taken from the cow. But the plan implies a quality of milk specially rich in butter. Bearing in mind the delicate nature of a calf's stomach, it requires great prudence in the employment of substitutes for the removed cream, or to augment the action of whole milk. Sugar, we have seen, produces sour; ground linseed suits very well, only butchers dislike calves so fed, the flesh not being sufficiently white. Margarine even has been proposed to be added to the skimmed milk; also malt, a preparation corresponding to that invented by Liebeg for children. Of all the substitutes ewe's milk has met with the most favor. The Dutch breed of sheep known as the Frise, yields two quarts of milk daily, but if crossed with English rams, the race loses thus good milking qualities. The pure native race in addition to not only yielding more milk, does also of a superior quality in fatty matter.

Shropshires for Michigan.

Mr. Wesley J. Garlock of Howell, Livingston Co., has just returned from a visit to the Dominion in search of some choice Shropshires, has secured a fine lot, and writes as follows in regard to them, under date of October 27th:

"I returned yesterday from Canada with 30 head of very choice Shropshire ram lambs and ewes, from lambs to four years of age. I visited the first flocks in Canada, and selected in every case the tops of the flocks. My friend Mr. Rundel put in his appearance while at one of the most prominent breeders, and if he did not secure some choice things to top his flock, my judgment is not very good. We shipped home together to Detroit, and every sheep stood the trip without any disadvantage.

"I must say in justice to Canadian breeders that I saw, if they are a fair index of the generosity and hospitality of all breeders in the Dominion, that we have no neighbors over the line to be ashamed of. Many Michigan breeders might well take a lesson in this respect.

"As the quickest and easiest way of reaching numerous correspondents, I wish you to say that I have some very choice ram lambs, all from imported sires and dams, or else dams from the first flocks in England; and am prepared to furnish either, fit to head flocks or establish new flocks, at as moderate rates as they can be had anywhere."

W. J. GARLOCK.

A Suggestion as to Seed Potatoes—
Keeping Hams.

HAMBURG, Oct. 31, 1883.
To the Editor of the Michigan Farmer.

Allow me to state my plan of saving seed potatoes. This fall sort out your required seed for next spring. A good fair potato the size of a hen's egg. Place them in boxes, mark and pack away where they will not be used. Now, if you should leave your potatoes in the bin you will be surprised next spring when you want your seed to find only very small potatoes.

Now comes a recipe for keeping hams: Place your ham in a good tight flour sack, bury them in your oat bin and I will warrant you hams next summer in harvest. They should not be placed in the sun until spring.

H. B. P.

Who Can Answer this Inquiry?

BATTLE CREEK, Mich., Sept. 28th, 1883.
To the Editor of the Michigan Farmer.

Will some one tell me through the Farmer what I can do to clear the rust out of a common iron convey pipe used for conducting water from house tank at well to stock tank? The pipe runs under ground and is nearly closed with what I think is rust. Will kerosene oil, poured into the pipe, be of any use to cut the rust?

A. J. L.

Red Polled Cattle.

CANTRELLVILLE, Oct. 30, 1883.
To the Editor of the Michigan Farmer.

We have been much interested in the many articles in the Farmer, showing the merits of the several different breeds of cattle. It has been some time since we have heard from the Red Polled cattle. How do they compare for milk with the Shorthorns? and are the Blacks better than the Reds for a general purpose cow? Let me hear from some of the breeders.

GRANGER.

We have little personal knowledge of the Red Polled cattle. We understand there is one herd in Michigan, but have never heard how they have met the expectations of their owner. It will always be a pleasure to the editor of the Farmer to have the advocates of the various

breeds give their opinions and experiences through it, for the general information of the farmers of the State, and for this purpose its columns are always open. We believe the Red Polled to be far superior to the Blacks as dairy cattle, but inferior as feeders. As general purpose cattle, for beef and milk, while the Red Polled have always stood high in their own locality, they have not taken the place of the Shorthorns or the Hereford with the British farmers of other sections. But the British farmers seldom changes either his opinions or his favorite breed of cattle; hence his practice should not always be quoted as a precedent which American farmers should follow.

Veterinary Department

Conducted by Prof. Robert Jennings, late of Philadelphia, Pa., author of "The Horse, its Diseases, Feeding and Diseases," "Horse Breeding Made Easy," etc. Professional advice through the columns of this journal to regular subscribers \$2.00 per year, and to others \$2.50 per year, and to those who desire to make careful examinations of your animals; note every symptom, no matter how trifling it may appear to be; examine the animal, note the appearance, the respiration, temperature of the body and legs, condition of the joints, kidneys, etc., caught, etc., other symptoms you may observe. In cases of lameness, note the manner in which the animal picks up the foot, carries the head, etc., and the manner in which it walks on the ground, soft or hard. These symptoms, when properly given, assist us to locate the disease, seat of lameness, in obscure cases. The symptoms should be accurately described, how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Private address, 201 First Street, Detroit.

Paralysis in a Sow.

OCALA, Oct. 26, 1883.
Veterinary Editor Michigan Farmer.

DEAR SIR:—As I am a reader of your paper, I desire some information concerning a sow which is sick. Yesterday I found her unable to walk when I went to feed her. Her hind parts seem to be affected; when she moves she drags her hind legs along the ground. I cannot feel any more heat than in other parts of the body. She is very little. She is sucking a litter of pigs that would do to wean; would it be best to wean or not to wean? I have not done anything for her except I have rubbed the small of her back with liniment. She has not been chased or hurt by other stock. She has run in clover pasture and has been fed swill and pumpkins, with a few partly rotten potatoes, and in good flesh. I noticed for two or three days before she did not act naturally, but thought she was not fat and lazy. This is not much to do for you to judge from, I know, but it is all I can tell you, and anything you can do for me will be thankfully received.

D. C.

ANSWER.—The trouble with your sow is paralysis of the hind quarters, a disease arising from several causes, which, from your description of symptoms we are unable to determine. Give the following: Sulphate magnesia, two ounces; Jamaica ginger root, pulv., one ounce; mix and divide into four powders; give one in the feed night and morning. Follow these powders with the following: Seign foaming, two ounces; mix and divide into 20 powders; give one in the feed night and morning. Bathe the loins once a day with Evinco Liniment. It would be advisable to wean the pigs.

CHRONIC EDÉMIA OF LEGS IN A MARE.

FOLESBURG, October 21st, 1883.
Veterinary Editor Michigan Farmer.

I returned yesterday from Canada with 30 head of very choice Shropshire ram lambs and ewes, from lambs to four years of age. I visited the first flocks in Canada, and selected in every case the tops of the flocks. My friend Mr. Rundel put in his appearance while at one of the most prominent breeders, and if he did not secure some choice things to top his flock, my judgment is not very good. We shipped home together to Detroit, and every sheep stood the trip without any disadvantage.

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which side of the deal they would take. Cable reports were unfavorable to sellers. At the close spot wheat was a shade higher on Saturday, while futures were lower. Closing price—wheat and futures were as follows: No. 2 white, No. 2 red, 44c; No. 3, 45c; No. 4, 46c; No. 5, 47c; No. 6, 48c; No. 7, 49c; No. 8, 50c; December, 49c; January, 50c; No. 9, 51c; February, 52c; March, 53c; April, 54c; May, 55c; June, 56c.

Barley—Steady; Michigan No. 1 is quoted at \$1.50, and No. 2 \$1.50 per cent. Canadian, \$1.50 per cent.

Feed.—The market is quiet and steady. Bran is quoted at \$1.75 per ton, coarse middlings at \$1.00-\$1.25, and fine at \$1.00-\$1.25.

Butter.—Market dull; creamy, 20c/lb.; good dairy, 19c/lb.; choice, 19c/lb.; ordinary, 20c/lb.

Cheese.—Michigan cream, 11c; skims 5c/lb.; B. Ohio full cream, 11c; New York, 12c.

Meat.—Market dull and unchanged; selling at 20c/lb. for fresh, and picked at 18c/lb.

Spices.—Bacon 14c/lb.; ham 14c/lb.; ham 13c/lb.; ham 12c/lb.; ham 11c/lb.; ham 10c/lb.; ham 9c/lb.; ham 8c/lb.; ham 7c/lb.; ham 6c/lb.; ham 5c/lb.; ham 4c/lb.; ham 3c/lb.; ham 2c/lb.; ham 1c/lb.

Wine.—Market quiet at \$1.00-\$1.25 per ton for No. 2 mixed, and 25c/lb. for No. 3.

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